

Jou (5,625,894) in view of Naimpally et al. (4,207,590) under 35 U.S.C. § 103. Applicants respectfully traverse.

Claim 1 of this application defines a bandpass filter that includes:

a bandpass filter input and a bandpass filter output;

a series circuit connected between said bandpass filter input and said bandpass filter output, said series circuit being formed of a first capacitor, a first parallel LC element connected to said first capacitor, a second capacitor connected to said first parallel LC element, and an inductor connected to said second capacitor;

a second parallel LC element having a first connection connected to a node between said first parallel LC element and said second capacitor and a second connection coupled to a fixed reference-ground potential via a third capacitor; and

a third parallel LC element having a first connection connected to a node between said second capacitor and said inductor and a second connection coupled to the fixed reference-ground potential.

The Examiner has stated that Naimpally et al. would have suggested placing capacitor in series with one of the parallel LC elements taught by Jou. Jou discloses a symmetric band-pass filter that is entirely made from parallel LC elements (See Fig. 4 and column 3, lines 26-34). Each parallel LC element is a self-contained unit with a specific function, i.e., a resonance circuit that cannot be divided in parts without losing this function. A capacitor is not a parallel LC element without an inductance.

One of ordinary skill in the art would not take a circuit having two series connected parallel-LC elements and arrive at a circuit having one parallel-LC element connected in series with a capacitor because the functional character of the circuit would be completely changed.

More specifically, Fig. 4 of Jou shows a symmetric N-stage filter ( $N=4$ ) that is a specific embodiment of the filter shown in Fig. 3. The numbering of the stages is discussed in regard to Fig. 3A and specific reference can be made column 2, lines 35-44. In regard to the filter shown in fig. 4, the impedance looking from one side into the n-th stage of the filter is the same as the impedance looking from the other side into the (N-n)-th stage of the filter (See column 3, lines 26-35). The symmetry is intended such that a switch can be integrated into the middle of the filter in a way such that the switch

connects two equal half-filters (See column 7, lines 37-56). The design is meant to match the input impedance of the filter to the impedances of the external ports that are connected to the filter (See column 2, lines 23-29).

One of ordinary skill in the art would not take a well matched symmetric N-stage band pass and destroy the symmetry thereof by removing many of the electronic components in order to obtain a circuit where impedance matching is not the primary issue.

In repetition, Fig. 2 of Naimpally shows a combined phase shift and band-pass filter (See the Abstract), whereas Fig. 4 of Jou shows a filter that is made from nine parallel LC elements that are pairwise equal. One of ordinary skill in the art would not combine the filter shown in Fig. 4 of Jou with the capacitors of Naimpally since as discussed above, that would destroy the symmetry of the filter of Jou.

In paragraph 2 on page 3 of the above-identified Office action, claims 5-7 have been rejected as being obvious over Takayama (5,483,209) in view of Jou (5,625,894) and Naimpally et al. (4,207,590) under 35 U.S.C. § 103. Applicants respectfully traverse.

Fig. 1 of Takayama does not show:

A first and a second node both coupled to a DC voltage connection;

A third node having a first terminal connected to the first node;

A fourth diode having a first terminal connected to the second node; or

A load dependent DV voltage source;

Further more, the bandpass filter defined by claim 1 would not have been obtained for the reasons specified above. The cited prior art does not suggest the invention as defined by claim 5.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 or 5. Claims 1 and 5 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1 or 5, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-7 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, he is respectfully requested to telephone counsel so that, if possible, patentable language can be worked out.

A credit card payment form and a petition for extension of time has been enclosed along with this response.

Please charge any fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

  
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